Packaging

|      |          |                                      | DQA: | Date: |
|------|----------|--------------------------------------|------|-------|
|      |          |                                      |      |       |
| UCD. | Vos / No | MADE ODDED MONICONEODMANICE / HDDATE |      |       |

|                           |        | ,          |            |          |        |                                |        |        |   |     | QA Closed:   | Dat                        | e:  |                                       |
|---------------------------|--------|------------|------------|----------|--------|--------------------------------|--------|--------|---|-----|--------------|----------------------------|-----|---------------------------------------|
| Work Orde                 | er.    |            |            |          |        | DISPOSITION                    |        |        | AGAINST                                 | DEI | PARTMENT     | /PROCESS                   |     | · · · · · · · · · · · · · · · · · · · |
| Part I                    | •      |            |            |          |        | Rework Scrap                   |        | ١      | Skid-tube Crosstube Machining Small Fab |     |              | Water Jet<br>d. Eng. Coor. |     | Engineering Quality Quality           |
| NCR I                     | No.    |            |            |          |        | Use-as-is<br>Work Order Update | ]   '' |        | noforming Finishing Large Fab Composite |     | Kec/Sto      | re/Packaging<br>Supplier   |     | Other                                 |
| Root                      |        |            |            |          | Descri | ption of work order update     | Initia | al     | Action                                  |     | Sign &       |                            |     | •                                     |
| Cause                     |        | Date       | Step       | Qty      | (      | or Non-conformance             | Chief  | Eng    | Description                             |     | Date         | Verification               | ۱   | QC Inspector                          |
| Doc/Data<br>Equip/Tooling |        |            |            |          |        |                                |        |        |   |     |              |                            |     |                                       |
| Operator                  | $\Box$ |            |            |          |        |                                |        |        |   |     |              |                            | - 1 |                                       |
| Material                  |        | -          |            |          |        |                                | ·      |        |   |     |              |                            |     |                                       |
| Setup                     | П      |            |            |          |        |                                |        |        | ·                                       |     |              |                            |     |                                       |
| Other                     |        |            |            |          |        |                                |        |        |   |     |              |                            |     |                                       |
| Process                   |        |            |            | İ        |        |                                |        |        |   |     |              |                            |     |                                       |
| Supplier                  |        |            |            |          |        |                                |        |        |   |     |              |                            |     |                                       |
| Training                  |        |            |            |          |        |                                |        |        |   |     |              |                            |     |                                       |
| Unapproved                |        |            |            |          |        |                                |        |        |   |     |              |                            |     |                                       |
|                           |        |            |            |          |        | F                              | AULT C | ATE    | GORY                                    |     |              |                            |     |                                       |
| Landi                     | ng (   | Gear       |            |          |        | General                        |        |        |   |     | -            |                            |     |                                       |
|                           |        | Bending    |            |          |        | Bend                           | Gra    | ain    |   |     | Ovalized     |                            |     | Pressure/Forced                       |
|                           |        | Centre No  | ot Conce   | ntric to | o/s    | BOM/Route                      | Har    | rdwa   | are                                     |     | Over/Under   | tolerance                  |     | Temperature/Cure                      |
|                           |        | Cracks     |            |          |        | Broken/Damaged                 | Ins    | pect   | ion Incomplete                          | _   | Part Incorre | ct                         |     | Weld                                  |
|                           |        | Crushed/   | Crimped.   |          |        | Burrs                          | Inst   | truct  | tions Incomplete/Unclear                | L   | Part Lost/M  | issing                     |     | Wrong Stock Pulled                    |
|                           |        | Cuffs      |            |          |        | Contamination                  | Ma     | ainte  | enance                                  |     | Part Moved   |                            |     |                                       |
|                           |        | Heat Trea  | at         |          |        | Countersink                    | Mis    | slabe  | eled                                    |     | Positioned \ | <b>N</b> rong              |     | •                                     |
|                           |        | Inspection | n Strip in | Tube     |        | Cut Too Short                  | Mis    | sread  | d                                       |     | Power Loss,  | 'Surge                     |     | Other                                 |
|                           |        | Ripples in | n Bend     |          |        | Drill Holes                    | Off    | set    |   |     |              |                            |     |                                       |
|                           |        | Torque W   | /aves in E | xtrusio  | n 🗀    | Drawing                        | Ou     | t of ( | Calibration                             |     |              |                            |     |                                       |
|                           |        | Turning S  | equence    |          |        | Finish                         | Ou     | t of : | Sequence                                |     |              |                            |     |                                       |
|                           |        | Wave/Tw    | ist in Tul | oe .     |        | Folio                          | Ou     | tside  | e Dimensions                            |     |              |                            |     |                                       |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Work Order ID 93832 Page 2 November-27-12 11:45:47 AM Item ID: D3882-1-130 Accept \*N900040100\* Setup Start **Revision ID:** Item Name: Extrusion "I" Beam Stop **Start Date: Start Qty: 40.00** 11/19/12 Cust Item ID: Required Date: 12/14/12 Req'd Qty: 40.00 **Customer:** Reference: Run Start Process Plan: Approvals: Date: \_\_\_\_ **Tooling:** Date: Stop QC: Date:\_\_\_\_ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Tool # Plan Accept Reject Reject Insp. Work Center ID Description **Run Hours** Code Qty-Number Stamp Qty 120 QC6- Inspect dimensions to drawing 0.00 \*120\* 0.00 Memo Quality Control Identify as per dwg & Stock Location: 130 \*120\* Packaging 0.00 Memo Packaging 140 QC21- Final Inspection - Work Order Release 0.00 15 HD MF 15 2 UF \*140\* 0.00 Memo Quality Control

|      |       |      |                                     | DQA: | Date: | • |
|------|-------|------|-------------------------------------|------|-------|---|
| NCR: | Yes / | / No | WORK ORDER NON-CONFORMANCE / UPDATE |      | -     |   |

|              |            |             |          |          |                            |            |        | •                |             | QA Closed:   | Date          | :                  |
|--------------|------------|-------------|----------|----------|----------------------------|------------|--------|------------------|-------------|--------------|---------------|--------------------|
| Work Orde    | ır.        |             |          |          | DISPOSITION                |            |        |                  | AGAINST DE  | PARTMENT     | PROCESS       |                    |
| Rew          |            |             |          |          |                            | 1 <b> </b> | :      | Skid-tube        | Crosstube   |              | Water Jet     | Engineering        |
| Part N       | o          |             |          |          | Scrap                      |            |        | /lachining       | Small Fab   | Pro          | d. Eng. Coor. | Quality            |
|              | •          | ·           |          |          | Use-as-is                  | ]   Th     |        | oforming         | Finishing   | Rec/Stor     | e/Packaging   | Other              |
| NCR N        | o          |             |          |          | Work Order Update          | J          |        | Large Fab        | Composite   |              | Supplier_     |                    |
| Root         |            |             |          | Descri   | ption of work order update | Initia     | al     | Act              | ion         | Sign &       |               |                    |
| Cause        | Date       | Step        | Qty      | •        | or Non-conformance         | Chief      | Eng    | Descr            | iption      | Date         | Verification  | QC Inspector       |
| Doc/Data     |            |             |          |          |                            |            |        |                  |             |              |               |                    |
| quip/Tooling |            |             |          |          |                            |            |        |                  |             |              |               |                    |
| Operator     |            |             |          |          |                            |            |        |                  |             | ,            |               |                    |
| Material     | _          | ]           |          |          |                            |            |        |                  |             |              |               |                    |
| Setup        |            |             |          |          |                            | 1          |        |                  |             |              |               |                    |
| Other        | _          |             |          |          |                            |            | j      |                  |             |              |               |                    |
| Process      |            |             |          |          |                            |            |        |                  |             |              |               |                    |
| Supplier     | _          |             |          |          |                            |            |        |                  |             |              |               |                    |
| Training     | _          |             |          |          |                            | **         | .      |                  |             |              |               |                    |
| Unapproved   |            |             |          |          |                            | !          |        |                  |             |              | <u> </u>      |                    |
|              |            |             |          |          |                            | AULT C     | ATEC   | GORY             |             |              |               |                    |
| Landin       | ng Gear    |             |          | _        | General                    |            |        |                  | <del></del> | 7            | _             | · ·                |
|              | Bending    |             |          | <u> </u> | Bend                       | Gra        |        |                  |             | Ovalized     |               | Pressure/Forced    |
|              | Centre N   | ot Conce    | ntric to | o/s      | BOM/Route                  | <b>⊢</b>   | rdwai  |                  | <u> </u>    | Over/Under   | <del> -</del> | Temperature/Cure   |
|              | Cracks     |             |          | <u> </u> | Broken/Damaged             | _ `        |        | on Incomplete    |             | Part Incorre | <u> </u>      | Weld               |
| 1            | Crushed/   | Crimped.    |          |          | Burrs                      | -          |        | ons Incomplete/l | Jnclear     | Part Lost/Mi | issing        | Wrong Stock Pulled |
|              | Cuffs      |             |          |          | Contamination              | <b></b>    |        | nance            |             | Part Moved   |               |                    |
| Ĺ            | Heat Trea  |             |          | <u> </u> | Countersink                | $\vdash$   | slabe  |                  | <u></u>     | Positioned V |               | $\neg$             |
|              | Inspectio  | •           | Tube     |          | Cut Too Short              | $\vdash$   | sread  |                  |             | Power Loss/  | Surge         | Other              |
| L            | Ripples ir |             |          | L        | Drill Holes                | ☐ Off      | set    |                  |             |              |               |                    |
|              | Torque V   | Vaves in E  | Extrusio | n L      | Drawing                    | Ou         | t of C | Calibration      |             |              |               |                    |
|              | Turning S  | Sequence    |          | L        | Finish                     | Ou         | t of S | equence          |             |              |               |                    |
|              | Wave/Tw    | vist in Tub | oe o     | 1        | Folio                      | Ou         | tside  | Dimensions       |             |              |               |                    |

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

**Picklist Print** 

November-27-12 11:45:46 AM

Page 1

Work Order ID:

93832

Parent Item:

D3882-1-130

Parent Item Name:

Extrusion "I" Beam

**Start Date:** 11/19/12

Required Date: 12/14/12

**Start Qty: 40.00** 

Required Qty: 40.00

Comments:

IPP RevA: New issue DD verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D3882-1-130P                    |                        | Manufactured  | No          |                     |                  |                 | Each               | 0.0000         |             | 40           |               |                |        |
| EXTRUSION                       |                        |               |             |                     |                  |                 |                    |                |             |              |               |                |        |

/13/1/<sub>1</sub>(72)

| DQA: | Date: |  |
|------|-------|--|
|      |       |  |

### **WORK ORDER NON-CONFORMANCE / UPDATE**

NCR: Yes / No QA Closed: Date: **AGAINST DEPARTMENT/PROCESS** DISPOSITION Work Order: Skid-tube Water Jet Engineering Crosstube Rework Machining Prod. Eng. Coor. Quality Small Fab Part No. Scrap Thermoforming Finishing Rec/Store/Packaging Other Use-as-is NCR No. Work Order Update Large Fab Composite Supplier Description of work order update Sign & Initial Action Root Chief Eng Description Verification QC Inspector or Non-conformance Date Cause Date Step Qty Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General Bend Grain Ovalized Pressure/Forced Bending Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure Broken/Damaged Weld Cracks Inspection Incomplete Part Incorrect Wrong Stock Pulled Crushed/Crimped. Burrs Instructions Incomplete/Unclear Part Lost/Missing Contamination Cuffs Maintenance Part Moved Countersink Mislabeled Positioned Wrong Heat Treat Cut Too Short Misread Power Loss/Surge Other Inspection Strip in Tube Ripples in Bend **Drill Holes** Offset Torque Waves in Extrusion Out of Calibration Drawing Turning Sequence Finish Out of Sequence

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

2.000 R0.030 4 PL R0.030 4 PL R0.010 4 PL R0.25 4 PL 3.714±0.024 3.518±0.024 3.026±0.024 ~ 0.100 R0.030 4 PL 0.701 R1.89 REF - 0.480

**D3882-1 EXTRUSION** 

GENERAL NOTES:

1) MATERIAL: 6061-76 PER QQ-A-200/8 OR ASTM B221
MINIMUM TENSILE YIELD STRENGTH = 35 KSI
MINIMUM LITIMATE TENSILE STRENGTH = 38 KSI MINIMUM ELONGATION = 8%

> A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES

- 2) BREAK ALL SHARP CORNERS 0.010 MAX
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) PART NUMBER IS D3882-1-XXX WHERE XXX IS CUT LENGTH IN INCHES (EX. D3882-1-180 IS 180" LONG)
- 6) D3882-1 EXTRUSION MANUFACTURED FROM: DIE # DAA-6

SING STATE Miller Comme

THERE RING

UNCONTRACT HD COPY

SUBJECT TO ALBOMENT

Wittenson

WC & ORDER NO 93832 MLJ 12-11-28

| A        | NEWIS        | SUE   |  | RF                           | 09.01.23               |  |  |  |
|----------|--------------|-------|--|------------------------------|------------------------|--|--|--|
| REV.     |              |       | DESCRIPTION  | BY                           | DATE                   |  |  |  |
| DESIG    | N            | RF    | DART AEROSE  | ACE USA                      | INC.                   |  |  |  |
| DRAWN RF |              |       | PORT HADLOCK, WA   |                              |                        |  |  |  |
| CHECH    | CHECKED SOLO |       | DRAWING NO.  |                              | REV. A                 |  |  |  |
| MFG. A   | PPR.         | Chilo | D3882  |                              | SHEET 1 OF 1           |  |  |  |
| APPRO    | VED          | /WW   | TITLE  |                              | SCALE                  |  |  |  |
| DE API   | PR.          | -#    | EXTRUSION  |                              | NTS                    |  |  |  |
| DATE     | 09.0         | 01.23 | COPYRIGHT © 2009 BY THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AI NOT TO BE USED FOR ANY PURPOSE OR COPEON WRITTEN PERMISSION FOR | NO IS SUPPLIED ON THE EXPRES | S CONDITION THAT IT IS |  |  |  |

8

D

С



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

## **PURCHASE ORDER**

## Purchase Order ID PO18554

Purchase Order Date 11/30/12 PO Print Date 12/07/12

Page Number 1 of 1

Order From:

VC-BON001

SIGNATURE ALUMINUM 1850 CLEMENTS ROAD PICKERING, ON L1W 3R8 CA

Contact Name

Vendor Phone

800 563 1079

Vendor Fax

800 565 8339

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr Terms

10127-2607 Net 30

Currency

CAD

**FOB** 

Destination-Collect

Ship To:

DART AEROSPACE LTD

1270 ABERDEEN HAWKESBURY, ON K6A 1K7

**CANADA** 

REDISEY

Line Nbr Reference Revision 1D Vendor Part Number

D3882-1-130P

Description/

Mfg ID

Req Date/ Taxable Unit of Measure

Req Qty/ Ship Method

Unit Price

Extended Price

**EXTRUSION** 

1/11/13

63.00

Yours ppd

\$52.7132

\$3,320.93

Yes

Each

NEC M

Special Inst:

EXTRUDE AS PER DWG D3882 REV. A

B93832

MATERIAL: 6061-T6 (QQ-A-200/8) OR

ASTM B221

MINIMUM YIELD TENSILE STRENGTH

= 35 KSI

MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI

MINIMUM ELONGATION = 8%

130" LONG

SIGNATURE ALUMINUM TOOL # DAA-6 PULL TEST TP ASTM STANDARD B221

REQUIRED

2

NEW DIE TO FABRICATE D3882-1-130 1/11/13

Yours ppd 1.00

\$1,100.0000

\$1,100.00

Yes

Each

CERTIFICATE OF CONFORMITY REO'D UPON DELIVERY

PO Total:

\$4,420.93

No substitution or deviation without consent.

Certificate of Conformity or Material Certification required #YES NO

Change Nbr:

**Change Date:** 12/07/12



ACCT# 46024

#### INVOICING AND COMPANY LOCATION

#### SHIPPING MANIFEST

MANIFEST DATE / DATE DU BODEREAU

01-06-13

SIGNATURE ALUMINUM CANADA 1850 CLEMENTS ROAD PICKERING ON L1W 3R8

REFER TO

THESE NUMBERS ON ALL CORRESPONDANCE REFEREZ-VOUS A CES NUMEROUS POUR TOUTE

CORRESPONDANCE

SALES ORDER NUMBER / N' DE COM 108286

MANIFEST NUMBER / N' DE BODEREAU

008815

TERMS / FREIGHT PP

TRAILER NUMBER /

LOCATION REMORQUE Nombre PIC

5303 JOB / FICHIER

042

SALESMAN /

VENDEUR

FIELD SALES REP / REP REGIONAL DES VENTES

**G.ATTENBOROU** 

CREDIT REP / REP DU CRÉDIT

**G.ATTENBOROU** CUST SERVICE REP / REP. SERVICE CLIENTELE

UNIT

UNITÉ

LB

DLB

SALES REP / REP. DES

VENTES

CUSTOMER ID / ID DU CLIENT

46024

ITEM

NO. /

NUMÉRO

001

SHIP TO / EXPÉDIÉ À

CANADA

DART AEROSPACE LTD.

HAWKESBURY, ON K6A 1K7

ORIGINAL ORDER

QUANTITY /

Quantité d'ordre ORIGINAL

1270 ABERDEEN ST.

PHONE: 613-632-5200

ORDER DATE / DE LA

UNIT

11/30/12

**PREVIOUS** UNITE SHIPPED QUANTITY PRÉCÉDENT Quantité livrée

DAA-6-1

D3882-1

MFG. PART NUMBER / MFG. PARTIE NUMÉRO CUSTOMER PART NUMBER / NUMÉRO DE RÉFÉRENCE DU CLIENT

BILL OF LADING NUMBER / NO. DE CONNAISSEMENT

SOLD TO / VENDUE À

**CANADA** 

CUSTOMER ON NUMBER CLIENT PO Nombre

008815

DART AEROSPACE LTD.

HAWKESBURY, ON K6A 1K7

1270 ABERDEEN ST.

PHONE: 613-632-5200

LENGTH / LONGUEUR **CUTTING TOLERANCE /** Tolérance de coupe 6061 T6

**ALLIAGE & TEMPER** 

FINISH DESCRIPTION / DESCRIPTION DE FINITION ABRICATION DESCRIPTION /DESCRIPTION DE FABRICATION SHIPPING TOLERANCE / EXPÉDITION TOLERANCE

CARRIER / TRANSPORTEUR

PKGS / GROSS LBS / NBR DE LIVRES BRUT PKGS 2

NBR OF

1,213 1,252 568

626

626

**NET QUANTITY** 

QUANTITÉ

NETTE

KG 550 PC 72

502 KG 63 PC

1.106 LB

Cut(+): 0.1180 Cut(-): 0.0000

130.0000 IN

ALLOY & TEMPER /

Min: -10 % Max: 10 %

**JODEE** 

819073 / 164164 819073 / 164165

606 606

36 PC 36 PC

QUANTITY

Quantité en

DUE /

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping manifests and signed and dated below by customers authorized representatives.

No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping manifest were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

Page 1

1,213 LB 1,252 508 72 PC TOTALS



# SIGNATURE ALUMINUM CANADA

1850 CLEMENTS RD PICKERING, ON L1W 3R8

# CERTIFICATE OF COMPLIANCE

|            |         | ender Shiel Grabania |                    |
|------------|---------|----------------------|--------------------|
| 01/06/2013 | 5296012 | 108286               | 1                  |
|            |         |                      | 130 50 10/10/21/25 |
| 18554      | 008815  | 819073               | 01/06/13           |

Solic for 46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 **CANADA** 

|                |      |          | E laste e endicione |          |         |  |
|----------------|------|----------|---------------------|----------|---------|--|
| 001            | þ/   | A-6-1    | 130" MILL 6061 T6   |          | D3882-1 | <u>)                                    </u> |
| Gross Weight   | T    | 1,252 LE | 3S                  |          |         | - 5/00                                       |
| Na Park        | T    | 1,213 LE | BS                  | (72 PCS) |         | 2 PKGS                                       |
| Specifications | 3.73 |          |                     |          |         | <b></b>                                      |
| ASTM B         | 322  | 1-08     |                     |          |         |  |
|                | 1=   |          |                     |          |         |  |

Mechanical Tests:

Tensile MPA / KSI 303.5 / (44.0 Yield

D13/2/5

Conductivity N/A

**HRE** 91

Chemical Analysis:

ZN CR MG CU MN FE SI 0.01 0.02 0.03 0.86 0.05 0.05 0.20 0.20 0.60

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical compositionfor the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our drder acknowledgement form. No other warranties are applicable.

S. Mazzotta, Director of Quality Signature Aluminum Canada Inc